

in view of Takada et al., U.S. Patent No. 5,715,104 (hereinafter Takada).

The Examiner rejects claims 28-30 under 35 U.S.C. § 103 as being unpatentable over the combination of Lang and Takada further in view of Radice, U.S. Patent No. 5,475,498.

Claims 10-12, 15-16, 21 and 24

The Examiner states that Lang discloses in Fig. 2, a video data recording and reproducing system for editing a source of video data (see col. 2, lines 29-38), said system comprising: a video tape recording means (see col. 3, lines 51-53, ". . . AVRU 11 may be a VCR . . .") for recording onto a tape medium with a first data rate ("real time input rate, from one of the sources"). The Examiner further states that Lang discloses a disc recording means, editing means and control means for controlling the Disc and VTR, functions such as recording from an external source, internal transfers, reproducing to various external unit mediums etc., editing internally and/or in combination with an external source, thereby controlling reproduction operation such as editing portions designated by an editing operation by the user thru user interface (see Fig. 1, control panels, switches or user interface controls etc.), reproduction/transmission, compression and format conversion {such as to RGB etc.) of received video and editing and handling of audio (see cols. 1-2; and col. 5, line 40 to col. 8, line 59). The Examiner also states that "VCR-ET" is shown in Fig. 1, comprising elements, such as, shown in Figs. 1A and 2-4 and is the editing system or unit itself. The Examiner asserts that it is clear in the digital environment Lang can provide high speed input/output of information to and from VCR-ET-10 as seen in Fig. 1, and discloses the utilization of a conventional VCR or video tape recording means, being an analog

VCR. The Examiner still further states that Lang discloses an AUX Digital Input-17 in Fig. 2 to the high speed data bus and discloses the ability to transfer information to and from the high speed bus at high transfer rates.

The Examiner concedes that Lang fails to clearly and specifically describe wherein the video tape recording apparatus or VCR and associated tape medium is capable of transferring recorded information at high speed or higher than a real time rate to the disc recording means and vice versa. The Examiner asserts that it is clear that, due to the limitation of the A/D conversion process for converting analog video signals to digital in the era of Lang (1988), that commercially available high speed A/D converters can be provided, but the disclosure only associates 30 frames/sec transfers from the analog VTR-AVRU-11 to the disc recording means-13 (see col. 4, line 64 to col. 5, line 15).

The Examiner further states that Lang discloses that the recording and reproducing means, AVRU-11, can be a digital recording and reproducing unit (see col. 3, line 61 to col. 4, line 43), thereby transferring video and/or audio in digital form to and from the digital AVRU-11, and clearly suggests utilization of alternate storage apparatuses and media.

The Examiner states that Takada teaches in Fig. 3 an apparatus performing the process of high speed dubbing, utilizing a D-VTR (see Abstract and col. 3, lines 1-4), wherein the digital signals are in digital form (see Fig. 3; and col. 15, lines 1-35, digital signal dubbing input and output) and further discloses controlling by providing synchronization signals, from one unit, being a master reproducing unit, to a recording unit being a slave recorder, for performing dubbing at N fold speed reproduction and recording or high speed dubbing (see col. 16, lines 20-59).

The Examiner concludes that it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Lang by replacing the "AVRU-11 being a conventional analog VCR associated with media-23", with, "the digital tape recording apparatus and associated tape medium, having advantages of providing higher transfer rates or high speed dubbing N fold speeds" as taught by Takada, thereby decreasing the amount of time required to transfer video and/or audio from tape recording and reproducing means or the AVRU-11 replaced with the high speed VTR, to the disc recording and reproducing means or memory unit-13 and vice versa, from the disc to the tape in any N-fold speed configuration to and from the two recording and reproducing means etc. (see Tape and Disc of Lang).

Responsive to the argument that Lang in view of Takada fails to teach, indicate or suggest the feature of "wherein said editing means . . . controls said recording operation of said video tape recording means", the Examiner states that the editing means is interpreted as merely the CPU or controller (see Lang Fig. 2, Unit-14, having a CPU-31, Rom-32 and user interface or controller-33) for controlling the recording and reproduction of the recording and reproduction units etc. of Lang, with a user interface thru a user.. The Examiner further states that Lang supports editing functions, therefore unit-14, comprising a CPU etc., and performing editing, clearly the CPU meets the recited feature.

In response, the rejection is respectfully traversed..

First, it is respectfully submitted that the proposed combination of Lang in view of Takada fails to teach, indicate or suggest all the claim elements. (Claim 10 recites "wherein said **editing means . . . controls** said recording operation of said **video tape recording means . . .**" (Similar language exists in claims 11

and 16.) It is respectfully submitted that Lang in view of Takada fails to teach, indicate, or suggest this claim feature.

The Examiner asserts, as understood, that Takada teaches a high speed dubbing tape device, and that Lang teaches high speed inputs 17 and 18 connected to high speed bus 34, and a DCU 14 for editing. Thus, in order to read on amended claim 10, Lang in view of Takada must teach or suggest "wherein Lang's DCU controls the recording operation of Takada's tape device".

It is respectfully submitted that Lang in view of Takada fails to teach or suggest this. Lang teaches that the fiber optic port 18 delivers signals to a fiber optic line from the high speed bus 34. See col. 8, lines 11-14. [However, Lang as understood fails to teach or suggest that commands may also be delivered to control the recording operation of the device connected to the fiber optic line, Takada's tape device. Furthermore, Takada as understood fails to teach or suggest how the tape device can receive commands from a connected device for control purposes.

Responsive to this argument, the Examiner asserts that user interface via Lang's CPU teaches this claim feature. However, this assertion fails to address how Lang's CPU provides commands to the tape device. The only connection to Takada's tape device, both as set forth by the Examiner and as disclosed in Takada as understood, is Lang's fiber optic port 18 delivering signals to a fiber optic line from the high speed bus 34. Nothing the Examiner has identified in Lang, Takada or the knowledge of one having ordinary skill in the art teaches or suggests that control commands are also provided on Lang's fiber optic port 18. So even assuming for the purposes of argument that Lang and Takada can exchange data via Lang's fiber optic port 18, this fails to teach or suggest that Lang controls the recording operation of Takada.

In summary, the Examiner as understood asserts that Takada's tape device may be **connected** to Lang; however, this fails to read on claim 10, which recites that the tape recording means is **controlled by** the editing means. Thus, it is respectfully submitted that claim 10 is allowable over Lang in view of Takada.

Second, the Examiner has conceded that Lang fails to disclose data transfer at a higher than real time rate. The Examiner attempts to cure this defect by stating that "commercially available high speed A/D converters **can be** provided" (emphasis added). However, it is insufficient that prior art teachings can be combined; the Examiner must provide a motivation to combine the references. See MPEP § 2143.01. The Examiner has merely provided a statement of operability, not a motivation to combine. Therefore, it is respectfully submitted that the addition of a high speed A/D converter to Lang cannot stand.

Third, the Examiner asserts at page 4, line 6 of the Office Action mailed May 17, 1999 a "disc recording means-13". The Examiner further makes this assertion in the context of increasing the data transfer rate disclosed by Lang. However, Lang discloses a "MEMORY 13", not a disc recording means-13. The Examiner has failed to state that it would be obvious to replace Lang's memory with a disc, as required to read upon the claims. Furthermore, it is respectfully that the Examiner cannot so state. It can be assumed for purposes of argument that a disk is slower than a memory. (If this assumption is unwarranted the Examiner is respectfully requested to so indicate.) Therefore, the Examiner is in the same sentence at page 4, lines 1-7 asserting that the transfer rate may be increased while simultaneously replacing the disclosed memory with a slower medium. It is respectfully questioned what would motivate one of ordinary skill to substitute a slower medium (as assumed)

when it is desired to increase the transfer rate. It is respectfully submitted that the Examiner's assertion is internally inconsistent.

Therefore, it is respectfully submitted that claims 10, 11 and 16, and their respective dependent claims, are allowable over Lang in view of Takada.

Claims 13-14, 22-23 and 25-27

Regarding claims 13, 22 and 25, the Examiner states that the combination applied meets the limitations of the first operation mode, for recording and reproducing in the first data rate and second data rate (N-fold speed and high speed transfers), between the disc and VTR and vice versa, wherein the editing means or controller [sic] (see CPU, controller and ROM unit-14 in Fig. 2).

Regarding claims 14, 23 and 26, the Examiner states that the combination of Lang and Takada further meets the limitation of a transfer means (see Fig. 21, "High Speed Bus-34") for transferring the reproduced video data from the tape recording means (see Takada), and said edited video data reproduced from the disc recording means.

Regarding claim 27, the Examiner states that the combination further discloses a video interface circuit for receiving said source video data (see Fig. 2); and a digital interface circuit for outputting edited video data (see Fig. 2, from Bus-34 to Audio/Video Tran/Rec. unit 22).

In response, it is respectfully submitted that claims 13-14, 22-23 and 25-27 are allowable as claims dependent from their respective parent claims 10, 11 and 16, allowable as argued above.

Claims 28-30

The Examiner concedes that the combination of Lang and Takada fails to disclose the utilization of buffering of video and/or audio data to and from the VTR and Disc recording and reproducing units of the editing system or an input and output buffers, coupled to the VTR and Disc and associated buffer control means.

The Examiner asserts that Radice teaches the utilization of a video recorder interface unit (see Fig. 1, "record interface-12") for controlling and performing a buffering, or a memory unit and controller for performing buffering (see Fig. 2, "memory-36", and associated control circuitry, "control circuitry-50" and associated elements 52, 44 and 38) for inputted as well as outputted data to and from a digital video recorder (VTR etc.) for facilitating desired high speed transfers to and from (see Fig. 1 and 2) having the advantage of allowing a digital video recorder to function as a universal data recorder (see col. 2, lines 31-44), wherein the digital video recording unit is controlled based on capacities of the input output buffering means (see col. 5, line 33 to col. 6, line 67).

The Examiner concludes that it would have been obvious to one skilled in the art at the time of the invention to modify the combination of Lang and Takada by incorporating buffering for the VTR means and Disc means for inputting and outputting video and/or audio data to and from the VTR and disc recording/reproducing means (being digital recorders) as taught by Radice having advantages of enabling a digital video recorder to function as a universal data recorder by utilization of the interface apparatus and further controlling the buffer fullness by controlling the speed of reproduction of the reproduction unit so that the buffer never runs out or over-fills, and to output data at the specified rate such as 1X, 2X (see Radice, col. 3, lines 12-37).

In response, the rejection is respectfully traversed.

First, claim 28 recites that the input and output buffering means buffer data to and from the disc recording means and the tape recording means. Conversely, Radice as understood discloses output (reproduction) buffering from a tape. See col. 3, lines 12-25; and col. 4, lines 59-61. The Examiner has failed to show how Radice discloses input buffering from a tape, output buffering from a disc, and input buffering from a disc.

Second, it is respectfully questioned what would suggest to one of ordinary skill to add a disc buffer when such a disc buffer is neither taught nor suggested by Lang, Takada, Radice or the knowledge of one having ordinary skill in the art.

Therefore, it is respectfully submitted that claims 28-30 are allowable.

Conclusion

In view of the above, it is respectfully submitted that the application is now in condition for allowance. The Examiner's reconsideration and further examination are respectfully requested.

Respectfully submitted,
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